

## Claims

Sub 17  
1. (amended) A magnetic transducer comprising:

a gap layer extending from a write gap toward a back of a yoke, the gap layer being in contact with and conforming to a first planarized surface;

a first pole piece of ferromagnetic material having a second planarized surface;

a second pole piece with a tip positioned at the write gap at an air-bearing surface and in contact with the gap layer;

a third pole piece of ferromagnetic material extending to the air-bearing surface and contacting the second pole piece at the air-bearing surface and extending toward the back of the yoke;

a pedestal of ferromagnetic material extending from the planarized surface of the first pole piece to the write gap, a planarized surface of the pedestal being in contact with the gap layer, a back surface of the pedestal defining a zero throat height line and the back surface being perpendicular to a bottom surface of the second pole piece;

a first back flux closure of ferromagnetic material in contact with the first pole piece and forming part of the back of the yoke;

a second back flux closure of ferromagnetic material forming part of the back of the yoke in contact with the first back flux closure and extending to contact the third pole piece; and

a first coil including a plurality of turns of electrically conducting material which pass between the second pole piece, the third pole piece, the gap layer and the second back flux closure.

2. (original) The magnetic transducer of claim 1 further comprising a second coil including a plurality of turns of electrically conducting material which pass between the first pole piece, the pedestal, the gap layer and the first back flux closure, the second coil being separated from the first pole piece by a layer of dielectric material disposed on the planarized surface of the first pole piece;

3. (original) The magnetic transducer of claim 2, wherein the turns of the first coil have an average spacing distance and the back surface of the pedestal is located within the average spacing distance from the second coil.

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Sub B1  
Cont

4. (original) The magnetic transducer of claim 2, wherein the turns of the first coil are in contact with the gap layer.

5. (withdrawn)

6. (original) The magnetic transducer of claim 1, wherein the second pole piece has a narrowest extent over the pedestal and flares out to a wider extent further away from the pedestal.

7. The magnetic transducer of claim 6, wherein the third pole piece contacts the second pole piece at the wider extent and ends before an air bearing surface of the magnetic transducer.

8-9. (withdrawn)

10. (amended) A magnetic transducer having a first pole piece (P1), a second pole piece (P2) and a third pole piece (P3) comprising:

a gap layer disposed on a first planarized surface;

a pedestal pole piece disposed in contact with a first side of the gap layer, the pedestal pole piece confronting the P2 across the gap layer forming a write gap, and the pedestal pole piece contacting the P1 which extends parallel to the gap layer to a back of a yoke;

the P3 being in contact with the P2 at the air-bearing surface and extending from the air-bearing surface to the back of the yoke;

ferromagnetic material forming the back of the yoke in contact with the P1 and the P3;

a first coil including a plurality of turns of electrically conducting material passing between the P1 and the gap layer; and

a second coil including a plurality of turns of electrically conducting material passing between the P3 and the gap layer and confronting the first coil, the first and second coils being separated by the gap layer.

11. (original) The magnetic transducer of claim 10, wherein the first planarized surface further comprises an upper surface of the first coil.

12. (original) The magnetic transducer of claim 11, wherein the first planarized surface further comprises areas of photoresist material and areas of alumina.

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13. (original) The magnetic transducer of claim 10, wherein the turns of the second coil are in contact with the gap layer.

14. (original) The magnetic transducer of claim 10, wherein the first and second coils are in contact with the gap layer on opposite sides of the gap layer.

15. (original) The magnetic transducer of claim 10, wherein the pedestal pole piece defines a zero throat height.

16-37 (withdrawn)

38. (amended) A disk drive comprising:

a disk having a thin film of ferromagnetic material on a planar surface of the disk;

a spindle rotatably supporting the disk;

an actuator supporting a magnetic transducer having an air bearing surface confronting the planar surface of the disk; and

the magnetic transducer including a write head comprising:

a first pole piece (P1) having a planar surface;

a first coil including a plurality of turns of electrically conducting material substantially surrounded by electrically insulating material which insulates and separates the first coil from the first pole piece;

a pedestal pole piece on the planar surface of the first pole piece adjacent to and outside of the first coil;

a back flux closure structure extending from the first pole piece to form a back of a yoke;

a gap layer disposed on a first planarized surface including a top surface of the pedestal pole piece;

a second pole piece (P2) positioned with a tip area confronting the pedestal pole piece forming a write gap at an air-bearing surface;

a second coil including a plurality of turns of electrically conducting material substantially surrounded by electrically insulating material, the second coil being adjacent to second pole piece (P2) and positioned to confront the first coil; and

a third pole piece (P3) extending from the air-bearing surface to the back flux closure structure and being in contact with the back flux closure structure and the second pole piece (P2) and extending over the second coil.

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